REMARKS

Claims **1-20** are pending in the present application. Claims **9-18** were amended and no claims were canceled or added. Reconsideration of the claims is respectfully requested.

Amendments were made to the specification to correct errors and to clarify the specification. No new matter has been added by any of the amendments to the specification.

I.   35 U.S.C. § 112, Second Paragraph

The examiner has rejected claim no. **5** under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter, which applicants regard as the invention. This rejection is respectfully traversed.

As should be apparent from the specification, the resource management means of the present invention may be comprised of a plurality of independent resource managers. Claim 1 recites a "resource management means comprises one or more the manager resource managers, said resource managers being one of:" semaphore resource manager; switch controller resource manager; agent resource manager; call data block resource manager; service logic resource manager; **or** switch resource resource manager. In addition to one or more of the above recited resource managers, the resource management means also includes a table manager resource manager; a queue logic manager resource manager; a system manager resource manager; and a shared memory manager resource manager. Each of these particular types of resource managers is shown on **FIG. 6** and described on pages 22 - 26 as being part of the resource management means.

It is not at all clear what the Examiner feels is indefinite about either claim **1** or claim **5** or the combination of claims. Claim **1** merely lists a plurality of unique resource manager types in the alternative and claim **5** lists another plurality of unique resource managers; however, in the case of claim **5**, the list is cumulative. Applicant's representative can see no possible indefinite language or even ambiguous claim language, especially when given the specificity of the present specification.

Therefore the rejection of claim no. **5** under 35 U.S.C. § 112, second paragraph has been overcome.

II.   35 U.S.C. § 102, Anticipation

The examiner has rejected claims nos. **1-8, 10-11, 15-16** and **18-19** under 35 U.S.C. § 102(e) as being anticipated by Sofman (U.S. Patent No. 5,937,042). This rejection is respectfully traversed.

The present invention relates to managing resources in a telecommunication network that are related to or accessible by a switch, such as Intelligent Service Networks (ISNs), for performing enhanced service call processing. More particularly, these resources relate to internal controller resources and external resources such as programmable switches that are necessary for providing a connection to a particular ISN.

In order for the requestor to access or update the information related to the resource, prior art telecommunications networks required that, for each unique resource, a requestor understand and utilize particular Application Program Interfaces (APIs). All resource information was stored and managed by the particular resource. Thus, each time a requestor desired resource information or to update resource information for a particular resource, the requestor had to express the query using an API understood by the particular resource and then transmit it to the resource for processing by the particular resource.

By contrast, the present invention uses a resource manager routine **114** for managing resources associated with an ISN. Resource manager **114** resides in the memory of switch controller **112** and utilizes an individual resource manager **304** for each individual ISN **126** resource, either internal operational resources, external components, or applications processing data. Each resource manager **304** comprises resource information and procedures for accessing the resource information. Resource manager **114** maintains resource information in tabular form as resource manager table(s) **406** in the memory of switch controller **112**. Further, resource manager routine **114** uses resource manager application program interfaces (APIs) **404** as the procedures for accessing resource manager table(s) **406** associated with a particular ISN **126** resource. In accordance with an exemplary embodiment of the present invention, each unique resource information table corresponds to a particular resource and is stored in the switch controller's memory. Similarly, every resource management API corresponds to a particular resource and therefore, a unique table of information for the particular resource is also stored in the switch controller's memory.

Further, distinctions between the present invention and the prior art can be drawn by the manner in which information for a particular resource is retrieved or updated. In practice, a query is sent to resource manager **304** that is responsible for managing requested resource information. Requester **306** might be a controller application program routine **116** or another component having access to ISN **126** resources. Again, the particular resource manager **304** receiving the query is one of a plurality of resource managers provided by resource manager routine **114** that together form a protective layer of standard procedures defined by the generic resource management APIs. The query from requestor **306** includes data related to a particular resource **310**. The resource management API(s) associated with the receiving resource manager **304** is processed by a processor, along with the data included in the query, in order to access specific resource information contained in resource management table(s) **406** pertaining to resource **310**. Thus, by processing the resource management API(s) and the data included in the query returns, or updates, **only** information about resource **310** stored in resource management table(s) **406** are managed by resource manager **304**.

The Examiner has rejected independent claims **1-3** over the system and method for rehome optimizing of a telecommunications network taught by Sofman. Sofman defines "rehome" as:

> The term rehome or rehoming, used as a noun, refers to a network change which involves moving telephone service traffic from one switching center to a different switching center. Likewise, the term rehome or rehoming, used in a verb sense, is referred to as making the network change of moving telephone service traffic from one switching center to a different switching center. For example, traffic on a first trunk between a first switch and a second switch may be rehomed onto a second trunk between the first switch and a third switch.

Sofman goes on to point out that the need for rehoming may result from, for example, switch decommission or failure, network optimization, switch upgrades, new installations, migration and that whenever the network traffic is not balanced properly, switches can become overloaded and cause calls to be blocked. Sofman discloses a method and system for rehome optimization that provides the ability to distribute telecommunications traffic properly on a switched network by automatically analyzing network data, calculating optimal network configurations according to the network data, and presenting recommendations for rehome

configurations. Network data is automatically gathered from the telecommunications network by Data Granulator process **104** shown in **FIGs. 1-2** and described on col. 4, lines 17-39. The data characterizes the current state of currently deployed network resources, including traffic put through and resource availability. Switch information, such as switch specifications and distances between switches, is collected for a network topology. Circuit information is also collected. A circuit is a minimal network granulation, a medium upon which a single telephone call is embodied. The circuit may be embodied as a single analog session between telephone users or a single timeslot dedicated to a single telephone session between users over a digital network connection. Logical groups of circuits, referred herein as Rehome Circuit Groups (RCGs), are collected for the switches. Traffic information is associated to the RCGs.

With respect to the present claims rejected by the Examiner, claim **1** recites:

> A computer in a telecommunications network, comprising:
> a processor; and
> a resource management means for enabling said processor to provide standardized management of multiple resources including internal operational resources, external components, and applications processing data,
> wherein said resource management means comprises one or more resource managers, said resource managers being one of:
> a semaphore resource manager;
> a switch controller resource manager;
> an agent resource manager;
> a call data block resource manager;
> a service logic resource manager; or
> a switch resource resource manager;
> wherein each of said resource managers comprises:
> one or more resource manager application program interfaces that manage said internal operational resources, said external components, and said applications processing data; and
> one or more data storing means for enabling said processor to store data in table format related to said internal operational resources, said external components and said applications processing data, said one or more resource manager application program interfaces manipulating the data to reflect the current resource state.

Claim **1** requires that the telecommunications network be comprised of a resource management means for enabling for the standardized management of multiple resources including <u>internal operational resources, external components, and applications processing data</u>.

Further, claim 1 requires that the resource management means comprises one or more resource managers and each resource manager comprises one or more resource manager application program interfaces (APIs) that manage the internal operational resources, external components, and applications processing data. Still further, claim 1 requires that each resource manager also comprises one or more data storing means for enabling a processor to store data in table format related to the internal operational resources, external components and applications processing data. And finally, claim 1 requires that one or more resource manager application program interfaces (APIs) manipulate the data in table format related to the internal operational resources, external components and applications processing data to reflect the current resource state.

Sofman's method and system for rehome optimization is far different from the claimed invention. Firstly, Sofman does not teach or suggest using resource manager APIs in the manner required by claim 1, which is for managing internal operational resources, external components, and applications processing data. Furthermore, the claimed invention utilized resource manager APIs for resource manager application program interfaces manipulating the data to reflect the current resource state. Nowhere does Sofman even mention using API's, much less using the specific type and use of APIs required by claim 5. Sofman is simply not suggestive of these features.

Similarly, nowhere has the Examiner pointed to any passage in Sofman which teaches or suggests a method and system for rehome optimization that includes a resource manager comprising of resource manager APIs and one or more data storing means for enabling a processor to store data in table format. Sofman does store data in table format but first, the data is not related to any particular resource manager and second, the data of Sofman's is not related to internal operational resources, external components **and** applications processing data. In fact, nowhere has the Examiner pointed to any passage in Sofman which teaches or suggests a method and system for rehome optimization that includes "a resource management means for enabling said processor to provide standardized management of multiple resources including internal operational resources, external components, and applications processing data." Sofman's rehome optimization seems to be limited to information about remotely located resource information, such as switch data, RCG data, RCG-RCG data and distance data. Even assuming that Sofman's rehome optimization method is incorporated in a telecommunications switch, the Examiner has

not pointed to managing an applications processing data resource. Here again, Sofman does not teach or suggest the resource manager recited in claim **1**.

As to the rejection of claim **2**, that claim recites:

> A method for managing resources within a network, comprising:
> (i) sending a query to a resource manager, wherein said resource manager manages information corresponding to a resource, said resource manager complying with a common standard for resource managers within the network; and
> (ii) managing data stored in memory and organized in table format using said query, including manipulating the data to reflect the current resource state;
> wherein data is one of:
> semaphore data;
> switch controller data;
> agent data;
> call data block data;
> service logic program data; or
> switch data.

Here again, Sofman's teachings are deficient because Sofman does not teach or suggest a method and system for rehome optimization that includes sending a query to a resource manager wherein said resource manager manages information corresponding to a resource and said resource manager complying with a common standard for resource managers within the network. It is not clear that Sofman ever establishes a common standard for resource managers within the network. Apparently, the data granulator **104** accepts network data **102** in whatever standard that is understood by the individual resources. All resource data entered in database **106** is attributable to data granulator **104**. Therefore, given the Examiner's rationale, data queries must flow from data granulator **104** to the resources in network data **102** and thus, only the responses are returned to the data granulator **104** and stored in database **106**. Nowhere does Sofman teach or suggest "sending a query to a resource manager ... managing data stored in memory and organized in table format using said query, including manipulating the data to reflect the current resource state." Sofman teaches to automatically gather data from the network (using data granulator **104**) and then store the network information in database **106**. Queries, if used at all, are set from the resources manager to the network resources.

Referring to the rejection of claim **3**, the claim recites:

A computer, comprising:
   a processor; and
   plurality of application program interface means for
enabling said processor which is connected to a memory, to
provide an interface between one or more resource requesters and
data organized in a plurality of tables, each of said plurality of
tables corresponding to one of a plurality of resources, each of said
plurality of application program interface means comprising:
            sending means for sending a query; and
            managing means for managing data stored in
said memory and organized in table format using said query;
      wherein said application program interface means provides
system-wide interface with said data;
      wherein each of said plurality of application program
interface means complies with a common standard for application
programmer interfaces;
      wherein each of said plurality of application program
interface means manipulating the data to reflect the current
resource state.

Here again, nowhere does Sofman teach or suggest to use application program interfaces
(APIs) in the manner required by of claim **3**. Resource manger APIs, according to the present
invention and as required by claim **3**, provide an interface between one or more resource
requesters and data organized in a plurality of tables. Moreover, claim **3** also requires that each
of said plurality of application program interface means have query capabilities and the ability to
manipulate the data organized in the table format to reflect the current resource state. Solman
simply does not suggest using APIs in this manner. Moreover and further, according to claim **3**,
said plurality of application program interface means complies with a common standard for
application programmer interfaces. Even if it could be argued that Solman's data granulator **104**
utilized APIs for retrieving resource data from network **102**, nothing in Solman suggests to move
away from the APIs presently understood by the individual network components to a common
standard for application programmer interfaces.

Since claims **4-20** depend from claim **1-3**, respectively, the same distinctions between
Sofman (U.S. Patent No. 5,937,042) and the claimed invention in claims **1-3** exists for these
claims. Additionally, claims **4-20** claim other additional combinations of features not suggested
by the reference. Consequently, it is respectfully urged that the rejection of claims **4-20** have
been overcome.

Therefore, the rejection of claims **1-20** under 35 U.S.C. § 102(e) have been overcome.

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III.   35 U.S.C. § 103, Obviousness

The Examiner has rejected claim **9** under 35 U.S.C. § 103(a) as being unpatentable over Sofman (U.S. Patent No. 5,937,042) in view of Taylor, et al. (U.S. Patent No. 5,912,961). This rejection is respectfully traversed for the reasons given above with respect to claim **3**.

Furthermore, the Examiner contends that one of ordinary skill in the art would modify the rehome optimization method taught by Solman with the API suspend command taught by Taylor. However, Solman specifically solves the problem of data collisions in database **106** by synchronizing data granualtor **104** with rehome optimizer **110**, in so doing data granualtor **104** with rehome optimizer **110** can work independently and a fresh snapshot of the network is always available for rehome optimizer **110** (col. 4, lins 30 - 40). Simply stated, the ordinary artisan would not be motivated to reach the invention recited in claim **9** without using the present specification as a roadmap or template because Solman solves the problem in a different manner.

"[I]t is impermissible to use the claimed invention as an instruction manual or `template' to piece together the teachings of the prior art so that the claimed invention is rendered obvious ... .This court has previously stated that `[o]ne cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to deprecate the claimed invention.' " *In re Fritch*, 972 F.2d 1260, 23 USPQ2d 1780 (Fed. Cir. 1992). Obviousness can not be established by hindsight combination to produce the claimed invention. ... [I]t is the prior art itself, and not the applicant's achievement, that must establish the obviousness of the combination. *'In re Dance*, 160 F.3d 1339, 48 USPQ2d 1635 (Fed. Cir. 1998). Close adherence to this methodology is especially important in the case of less technologically complex inventions, where the very ease with which the invention can be understood may prompt one `to fall victim to the insidious effect of a hindsight syndrome wherein that which only the inventor taught is used against its teacher.' "); *Al-Site Corp. v. VSI International Inc.*, 174 F.3d 1308, 1324, 50 USPQ2d 1161, 1171 (Fed. Cir. 1999).

Therefore, the rejection of claim **9** under 35 U.S.C. § 103(a) has been overcome.

The Examiner has rejected claim nos. **12-14** and **17** under 35 U.S.C. § 103(a) as being unpatentable over Sofman (U.S. Patent No. 5,937,042) in view of Gottlieb (U.S. Patent No. 5,920,621). This rejection is respectfully traversed for the reasons given above with respect to claim **3**.

Here again the Examiner contends that one of ordinary skill in the art would modify the rehome optimization method taught by Solman with an agent entry via an API and receiving heartbeat messages according to the teaching of Gottlieb. There is simple no motivation for such a modification suggested by either Solman or Gottlieb. The mere fact that the prior art could be readily modified to arrive at the claimed invention does not render the claimed invention obvious; the prior art must suggest the desirability of such a modification. *In re Ochiai*, 71 F.3d 1565, 1570, 37 U.S.P.Q.2d 1127, 1131 (Fed. Cir. 1996); *In re Gordon*, 733 F.2d 900, 903, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984).

Therefore, the rejection of claim **12-14** and **17** under 35 U.S.C. § 103(a) have been overcome.

The Examiner has rejected claim **20** under 35 U.S.C. § 103(a) as being unpatentable over Sofman (U.S. Patent No. 5,937,042) in view of Reto et al. (U.S. Patent No. 5,825,857). This rejection is respectfully traversed for the reasons given above with respect to claim **3**.

Applicant's representative admits that it might, again, be possible to modify Solman, however it is unclear why an artisan would look to Reto for an improvement. Solman and Reto are not analogous art in that a person with ordinary skill in the art would not be expected to examine Reto because Reto is neither telecom resource management art the art or provides a solution to the present problem. Therefore, at a minimum the references themselves must state a reason for combining the teachings of the references to reach the presently claimed invention. As the Examiner has used generally available motivation as a reason for suggesting the combination of references, it is respectfully submitted that the rejection is improper.

Therefore, the rejection of claim **20** under 35 U.S.C. § 103(a) has been overcome.

IV.   Objection to Claims

The Examiner has stated that claim **1** was objected to because of the following informalities: Claim **1** line 13 recites "a switch **resource resource** manager". Claim **11** recites a IPC, a term not well known in the art.

A "switch resource resource manager" is a resource manager for switch resources and used throughout the specification. Claim **11** has been amended.

V.   Conclusion

It is respectfully urged that the subject application is patentable over any combination of Sofman, Gottlieb and Reto et al. and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if, in the opinion of the Examiner, such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: 02/13/01

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